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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicants: Roger R. Lesieur

Docket No.: C-2267

Serial No.: 09/321,390

Group: 1764

Filed: May 27, 1999

Examiner: B. Ridley

For: "Compact Light Weight Autothermal Reformer Assembly"

Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir:

Enclosed are three copies of a Reply Brief for use in connection with the captioned patent application.

Respectfully submitted,

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Date: 6-13-01

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**REPLY BRIEF UNDER RULE 193 (b) (1)**

Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir:

This is a reply brief which is responsive to certain points raised in the Examiner's Answer dated June 4, 2001 relating to the above-identified application.

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In the Answer, the Examiner has noted that the section of the Appeal Brief relating to the grouping of claims was incorrect, and we agree with her observation. This section of the Appeal Brief should read as follows: Claims 2-6, 9-12 and 16-18 stand or fall together; Claims 13-15 stand or fall together; Claims 1, 7, 21 and 22 stand or fall together. Claim 19 stands or falls by itself. The patentability of each of the aforesaid sets of claims over the cited prior art has been argued separately in the Appeal Brief. The presumption by the Examiner that all of the claims stand or fall together based on her assessment of the Appeal Brief is clearly unsupported. The patentability of each of the aforesaid four sets of claims was argued separately in the Appeal Brief, and the Examiner recognizes that fact on page 3 of the Answer.

In the initial paragraph on page 16 of the Answer, the Examiner advises the Appellant to direct comments to the merits of the rejections and objections, and she states that her educational and/work background is not an issue in this appeal. We note that the Examiner explicitly stated that she could be considered to be one of skill in the art on page 13 of the final rejection. Thus the Examiner made the questions of her educational level and her work experience an issue in this appeal which Appellant was required to either respond to or admit. In the Answer she has not recanted her allegation that she can be considered to be one of skill in the art of hydrocarbon fuel reforming, thus this allegation remains an issue in this appeal.

On pages 17, and 21, the Examiner, in arguing the question of motivation to combine the disparate teachings of the references she has cited, has stressed that motivation to combine can come from either the references themselves, or in the knowledge generally available to one of ordinary skill in the art. (emphasis in Answer). Thus the

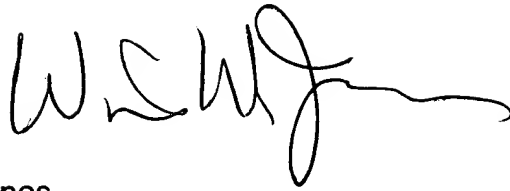
Examiner seems to be relying on "the knowledge generally available to one of ordinary skill in the art" in finding motivation to combine in her §103 rejections. It is noted that the Examiner has not defined "one of ordinary skill in the art" of hydrocarbon fuel gas reforming, except to allege that she is such a person without any proof of this allegation; and she has not identified what "the knowledge generally available" to such a person. Thus the Examiner has not supplied any evidence as to who one skilled in this art is, and what knowledge is generally available to such an individual. In Ex parte Levy, 17 USPQ2d 1461 (US PTO Bd. Pat. App. & Int. 1990), the Board held that the initial burden of establishing a *prima facie* basis to deny patentability rests upon the examiner. See also In re Carleton, 202 USPQ 165 (CCPA 1979); and In re Piasecki, 223 USPQ 785 (Fed. Cir. 1984). This burden can only be discharged by establishing a factual basis for the finding of non-patentability. Examiner's conjecture or conclusionary assertions do not provide the necessary factual basis. In this case, the Examiner has not established a factual basis which defines one of ordinary skill in the art of hydrocarbon fuel reforming, and has not established a factual basis which defines what knowledge is generally available to such a person. The Examiner has thus failed to discharge her burden of proof on this point, which she seems to rely heavily on in the rejections and in the Answer.

On page 22, the Examiner alleges that a hydrocarbon fuel reformer environment is "less stringent" than a catalytic converter, without a scintilla of evidence to back up this allegation. Referring to sentence bridging pages 22 and 23 of the Answer, we note that what is claimed in Claims 13-15 of this application is not merely a catalyst bed "metal support" as suggested by Sheller, but is, in fact, a foam catalyst bed metal support, as is condemned by Sheller.

On page 23 of the Answer, when characterizing Setzer et al '578, the Examiner alleges that the teaching of an iron oxide catalyst in an inlet portion of the reformer is in fact a teaching of an iron oxide/calcium oxide catalyst mixture in the inlet portion of the reformer, merely due to the inclusion of the phrase "catalysts according to the present invention" in the patent. The portions of the patent quoted by the Examiner do not support her position. Note that the patent explicitly states that there is only one catalyst, iron oxide, and not catalysts, in the inlet portion of the reformer.

On page 23 of the Answer, the Examiner alleges that the Setzer et al '578 reformer, which operates at a temperature of about 1,350°F, or so (a fact which is undisputed by the Examiner) could possibly combust a portion of a fuel gas at a temperature of about 500°F. This speculation by the Examiner as to what temperatures the Setzer et al '578 reformer could possibly combust a fuel gas are nothing more than speculation and conjecture, and does not discharge the Examiner's burden of proof on the question of obviousness, as noted above.

Respectfully submitted,



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